

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/051345

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B01D50/00 C10G11/18 B01D45/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 B01D F23J C10G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 556 479 A (BLACK ALAN J ET AL) 3 December 1985 (1985-12-03) column 2, lines 15-52 column 3, line 13 - column 4, line 42 column 6, lines 24-52; figure	1-7,9
X	US 6 551 565 B2 (GILMAN KEVIN R ET AL) 22 April 2003 (2003-04-22) column 2, line 46 - column 3, line 4 column 3, lines 51-60 column 4, line 37 - column 5, line 25; figure 3	1-7
X	US 4 208 384 A (MITCHELL NORRIS W) 17 June 1980 (1980-06-17) column 2, line 61 - column 3, line 50; figure	1-8

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the International search

10 November 2004

Date of mailing of the International search report

19/11/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 105 939 A (UOP INC) 25 April 1984 (1984-04-25) page 9, line 14 - page 13, line 13; figure -----	1-8
A	US 4 286 973 A (HAMLIN ROBERT N ET AL) 1 September 1981 (1981-09-01) column 1, line 46 - column 2, line 24; figure 1 -----	1-9
A	US 4 501 820 A (ALLAN DAVID E ET AL) 26 February 1985 (1985-02-26) column 2, line 36 - column 5, line 42; figure -----	1-8

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Information on patent family members

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 4556479	A	03-12-1985	EP FR WO	0246229 A1 2590804 A1 8703294 A1	25-11-1987 05-06-1987 04-06-1987
US 6551565	B2	06-06-2002	US	2002068031 A1	06-06-2002
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EP 0105939	A	25-04-1984	EP	0105939 A1	25-04-1984
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US 4501820	A	26-02-1985		NONE	